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ABSTRACT

This paper reviews and classifies adult career problems and interventions reported in the vocational literature from 1979 to 1984. Campbell and Cellini's (1981) taxonomy of adult career problems was used to classify reports of vocational problems. The categories presented by Holland, Magoon, and Spokane (1981) were employed to classify interventions. A "problem-treatment matrix" was produced that indicated a significant relationship betwwen vocational problems and interventions, with an almost exclusive reliance on individual counseling, and a predominant concern about problems affecting job performance. Thus, adequate preparation of counselors working in this area must include skill development related to identification and treatment of performance problems, especially alcohol abuse, in addition to the traditional emphasis on vocational choice. The benefits of individual counseling were not proven in the research reviewed. Future research in this area needs to become more evaluative, particularly as meta-analytic methods of analyzing aggregate data continue to develop. Finally, Campbell and Cellini's taxonomy proved to be fairly comprehensive and inclusive, although stress-related and career transition problems were often difficult to classify. Further work with the problem taxonomy seems warranted. (Author/KC)

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Vocational problems and interventions in business and industry: A taxonomic review of recent studies

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Abstract

This paper reviews and classifies adult career problems and interventions reported in the vocational literature from 1979 to 1984. Campbell and Cellini's (1981) taxonomy of adult career problems was used to classify reports of vocational problems. The categories presented by Holland, Magoon and Spokane (1981) were employed to classify interventions. A "problem-treatment matrix" was produced which indicated a significant relationship between vocational problems and interventions, with an almost exclusive reliance on individual counseling, and a predominant concern about problems affecting job performance. Implications for research and practice are discussed.

Vocational problems and interventions in business and industry: A taxonomic review of recent studies

Those concerned with career-related problems have until recently concentrated most of their research and practice on student populations. Spokane and Oliver's (1983) review of career intervention studies, for example, did not include a single study of non-institutionalized working adults. Adult vocational concerns may differ from student concerns, and may require specifically designed interventions.

Indeed, there is growing recognition of the fundamental importance of reliable vocational-problem diagnostic systems in the development of an applied science of career intervention (Rounds and Tinsley, 1984). The effects of vocational interventions cannot be determined without adequate specification of population, setting, problem and treatment program characteristics. The purpose of this paper is to employ currently available taxonomies in order to examine the distribution of vocational problems and interventions in recent literature.

Campbell and Cellini (1981) have recently proposed a diagnostic classification of adult career problems. Their classification was developed through a review and synthesis of the theories and research of adult career development and a descriptive analysis of adult career problems. Their diagnostic classification is organized according to the four stages of adult career development (preparation, establishment, maintenance, and

retirement) with career development tasks specified for each of the stages. For example, major category 3.0 is called "Problems in organization/institutional performance" and includes such sub-categories as 3.1 "Deficiencies in skills, abilities, and knowledge."

There is as yet no classification of career interventions as elaborately developed as Campbell and Cellini's taxonomy of adult career problems. It is possible, however, to organize career interventions into broad categories such as counseling, assessment, education, information/referral and organizational development on the basis of common distinctions in the literature. These categories are similar to the ones used by Holland, Magoon and Spokane (1981) in their review of the career intervention literature.

The purpose of the present paper, then, is to review and classify career-related problems and interventions in business and industry. A second objective is to produce a "problem-treatment matrix" similar to that which Dunnette (1982) has proposed for studying person-job relationships. Essentially, such a matrix will provide data on the relative frequency of particular problem-treatment combinations.

Method

The literature was searched from 1979 to 1984 for published studies involving vocational interventions in a business or industrial setting. The following journals were exhaustively

searched: Academy of Management Journal, Administrative Science Quarterly, The Annual Review of Psychology, The Journal of Counseling Psychology, The Journal of Vocational Behavior, The Personnel and Guidance Journal, Personnel Psychology, Psychological Abstracts, and The Vocational Guidance Quarterly. Once an article or book was identified, the reference list was searched for additional sources. The search resulted in 120 published references to specific programs. From this total, 90 included a description of a specific vocational problem and intervention technique. In some cases, multiple programs, problems and techniques were described in the same source. Wherever possible, these were listed and considered as independent cases. For example, an article containing descriptions of two programs at separate companies which included a description of the problem and treatment method at each company contributed two cases to the data. Only those cases in which a specific problem was linked to a specific intervention technique were included. That is, multifaceted programs which did not provide a one to one match of problem and treatment were excluded.

The resulting data set consisted of a verbatim listing of vocational problems and treatments as they were described in the original source. The descriptions were then coded by the first author with the following procedure. First, vocational problems were matched to the most specific level possible in Campbell and Cellini's taxonomy. That is, an attempt was made to match each

problem to a sub-category level in the taxonomy; when this was not possible the problem was classed at the major category level. Career interventions were coded in a similar way, though they were only classified by the five major categories of interventions.

Results

Incidence of vocational problems

The results of coding vocational problems according to Campbell and Cellini's taxonomy are reported in Table 1. Among the four major categories, the most frequently reported problems fell into category 3.0, "Problems in organizational/institutional performance" (n=43, 48%). This is not a surprising finding since many company-based programs consist in interventions implemented when an employee evidences job performance problems. The frequency of citation of problems in the other major categories included 23% (n=21) for problems in career decision making, 18% (n=16) for problems in organizational/institutional adaptation, and 11% (n=10) for problems in implementing career plans. Thus, performance related problems appear to be the primary concern in business settings. When the other three categories are viewed as a composite of problems not related to performance, they comprise over half of all problems reported.

Insert Table 1 about here

Among the diagnostic sub-categories, personal factors accounted for nearly one-fourth of all problems. This included such things as "debilitating physical and/or emotional disorders" and "adverse off-the-job personal circumstances or stressors" (primarily alcohol abuse by either the employee or a family member). After this category, there was considerable spread in reported vocational problems among the other sub-categories. None of the other sub-categories accounted for more than 9% of the total number of problems cited.

Career interventions

As shown in Table 2, counseling appears to be the treatment of choice in business and industrial settings. Sixty-six percent (n=59) of all interventions fell into this category. Eighty percent (n=47) of the counseling interventions were described as individual counseling while the remaining 20% (n=12) employed a group format (i.e., traditional group counseling, structured workshops, and peer support groups). Assessment was the next most commonly employed method (n=11, 12%), while education (n=4, 4%), information/referral (n=6, 7%) and organizational development (n=10, 11%) were less frequently used as an intervention technique.

Insert Table 2 about here

In order to provide some basis for comparing research reports to company practices, the data from Walker and Gutteridge's (1979) survey of Fortune 500 businesses were classified into the same set of intervention categories used in the present analysis. Walker and Gutteridge's data were classed as follows: Counseling-69%, Assessment-19%, Education-5%, Information/referral-6%, Organizational change/development-0. Viewed from this perspective, the survey data on company practices seem to parallel the data presented in Table 2.

Problem-treatment matrix

The third phase of the analysis involved cross-tabulation of each vocational problem with its corresponding career intervention. The result of this procedure is the "problem-treatment matrix" presented in Table 3. Several indices of association between problems and treatments in this table were calculated and indicated that there is a slight to moderate degree of association between vocational problems and interventions. For example, the Chi-square for this table was 21.75 (12, $N=90$), $p < .05$. Cramer's V, a measure of association ranging from 0 to 1, was .28, again indicating a slight to moderate association between problems and interventions. Counseling is the most frequently described intervention for all problems and it is notable that only job performance problems have been addressed with all five intervention categories. Only

four instances of educational interventions were discovered and all four of these were associated with performance problems.

Insert Table 3 about here

The fact that seven of the twenty cells in the table are empty (no reported instances of the problem in combination with the treatment) may indicate that these combinations have not yet been studied or implemented.

Discussion

This review of vocational interventions in business settings suggests several conclusions and implications for research and practice in this area. With regard to practice, it is fairly clear that problems related to job performance, or "satisfactoriness" (Dawis & Lofquist, 1984) are of primary interest in private sector company-based programs. Thus, adequate preparation of counselors working in this area must include skill development related to identification and treatment of performance problems, especially alcohol abuse, in addition to the traditional emphasis on vocational choice.

It is important to note that many of the vocational problems included in Campbell and Cellini's taxonomy are treated independently of the work place (e.g., in mental health centers). Therefore, this review may over or under-represent the incidence

of vocational problems.

In addition, reliable classification of vocational problems and interventions, whether at the level of the individual person, program, or published report, is dependent on the clarity of definitions and procedures for making judgments about people, problems and programs. The reliability of the data developed in this paper has undoubtedly been influenced by the subjective judgments made at each of these levels. Independent replication of the present findings would add an important dimension to confidence about the data.

Individual counseling was the most frequently cited approach to all categories of vocational problems. Given the dearth of outcome and cost-benefit data available in this area, as well as the relatively infrequent application of other interventions, it is not yet possible to endorse the predominance of individual counseling in business settings on an empirical basis. Future research in this area needs to become more evaluative, particularly as meta-analytic methods of analyzing aggregate data continue to develop. The data reviewed here do not shed light on the issue of intervention effects, but there is evidence of a small and systematic association between problems and treatments in the literature.

Finally, Campbell and Cellini's taxonomy proved to be fairly comprehensive and inclusive, although stress-related and career transition problems were often difficult to classify. Further work with the problem taxonomy seems warranted.

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Table 1

Frequency of Problems in Major Categories and Sub-Categories

Problem	Percentage	n
1.0 Problems in career decision making	12%	10
1.1 Getting started	0	0
1.2 Information gathering	5%	5
1.3 Generating, evaluating, and selecting alternatives	3%	3
1.4 Formulating plans to implementing decisions	3%	3
Subtotal	23%	21
2.0 Problems in implementing career plans	7%	6
2.1 Characteristics of the individual	2%	2
2.2 Characteristics external to the individual	2%	2
Subtotal	11%	10

table continues

3.0	Problems in organization/ institutional performance	9%	8
	3.1 Deficiencies in skills, abilities and knowledge	6%	5
	3.2 Personal factors	24%	22
	3.3 Conditions of the organization/ institutional environment	9%	8
	Subtotal	48%	43
4.0	Problems in organizatonal/institutional adaptation	6%	5
	4.1 Initial entry	3%	3
	4.2 Changes over time	3%	3
	4.3 Interpersonal relationships	6%	5
	Subtotal	18%	16
Total		100%	90

Table 2

Frequency of Vocational Interventions in Published Reports

Intervention	Percentage	n
Counseling	66%	59
Assessment	12%	11
Education	4%	4
Information/referral	7%	6
Organizational change/development	11%	10
Total	100%	90

Table 3

Problem-Treatment Matrix

Problem	Treatment				
	Counseling	Assessment	Education	Info/refl	Organizational dev.
Decisions (n=21)	57%	27%	0	14%	0
Implementation (n=10)	90%	10%	0	0	0
Performance (n=43)	58%	7%	9%	7%	19%
Adaptation (n=16)	81%	6%	0	0	13%

χ^2 (12, N=90)=21.75, $p<.05$